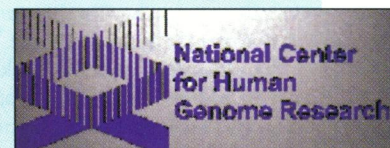


National Center for Human Genome Research

To direct its role in the Human Genome Project—the worldwide research effort to map the human genome—the National Institutes of Health formed the National Center for Human Genome Research (NCHGR) in 1989.

The NCHGR has a home page on the Internet located at <http://www.nchgr.nih.gov>, which offers the opportunity to learn about the center, its organization, and research. The link to NCHGR's Mission Statement and Organization describes the agenda and different offices of the NCHGR.

There are three main divisions of the NCHGR: the Office of the Director (OD), the Division of Extramural Research (DER), and the Division of Intramural Research (DIR). The home page provides links to these divisions and their respective branches.



The OD provides leadership for the NCHGR and develops scientific, fiscal, and management strategies. The office oversees research, formulates research goals, and promotes international coordination and data exchange. Links are provided to the divisions of the OD including the Office of Administrative Management, the Office of Information Systems Management, the Office of Policy Coordination, and the Office of Scientific Review.

A link to public information within the Office of Policy Coordination offers press releases and informational articles about the NCHGR. This link also provides information about the task force on genetic testing, a committee developed by the NIH–DOE Joint Working Group on the Ethical, Legal, and Social Implications of Human Genome Research to perform a two-year evaluation of the current state of genetic testing technologies in the United States. The committee will examine tests used to assess genetic disease risk for issues such as safety, effectiveness, and accuracy. The task force will also focus on the psychological effects of genetic testing and discuss what individuals with altered genes can do to prevent disease in the future.

The public information link also offers a link to *The Human Genome Project: Maps to Medicine*, which gives an overview of the Human Genome Project's relevance to society and describes the processes involved in using genome data to prevent and cure genetic diseases. It includes basic information about genetics and an explanation of the Human Genome Project.

The DER funds Human Genome Project research in chromosome mapping, DNA sequencing, database development, technology development for genome research, and studies of the ethical, legal, and social implications of genetics research in laboratories throughout the country.

Links to the divisions of the DER include the Ethical, Legal, and Social Implications Branch; Mammalian Genomics Branch; Mapping Technology Branch; and Sequencing Technology Branch. There are also links to NCHGR grants and funding and NCHGR notices, policy statements and guidelines, and reports.

The DIR focuses on applying genome technologies to finding human disease genes, and developing DNA-based diagnostics and gene therapies. The division serves as a center for NIH-wide human genetics research, complementing the work of investigators in other NIH institutes who are searching for specific genes and studying their function in health and disease. The mission of the DIR is to develop and implement technology for the rapid isolation, analysis, and treatment of genetic diseases.

The site provides links to the various divisions of the DIR including The Breast Cancer Information Core (BIC) Homepage, Clinical Gene Therapy Branch, Diagnostic Development Branch, Genetic Resource Branch, Laboratory of Cancer Genetics, Laboratory of Genetic Disease Research, Medical Genetics Branch, Principal Researchers and Advisors, Technology Transfer, and Visiting Investigator Program.

The home page also offers NCHGR resources, including a site keyword search engine and other sources on the Internet.

EHP online: <http://ehpnet1.niehs.nih.gov>

American Free Trade Agreement created the Border Environment Cooperation Commission (BECC) to oversee pollution reduction of all kinds—air, water, and solid waste. Groups working specifically on the brickmaking problem include the Environmental Defense Fund (EDF), Physicians for Social Responsibility, the Federación Mexicana de Asociaciones Privadas de Salud y Desarrollo Comunitario (FEMAP), and El Paso Natural Gas (EPNG). FEMAP and EPNG started a brickmaking school to teach the *ladrilleros* how to use higher quality fuel. According to EPNG vice president John Somerhalder, the school also helps the brickmakers with safety and business practices as well. "A huge number of brickmakers, not only from Juarez but from all over Mexico, have been through that school," Somerhalder says.

For a time, brickmakers were able to use liquefied petroleum gas (LPG), also known as butane. But in 1994 the Mexican government began to phase out its subsidy of LPG. Around the same time, the peso was also devalued. Consequently, the cost of LPG rose steeply. The brickmakers reverted to the cheaper fuels, especially at night, despite the fact that the Mexican government has made it illegal to burn tires.

A combined amelioration effort by EPNG and New Mexico's Los Alamos National Laboratory (LANL) has shown strong promise. LANL materials scientists Karl Staudhammer and Charles Grigsby experimented with kiln design to improve fuel efficiency. "The big problem is nonuniformity of temperature," Staudhammer says. The LANL design entails building several kilns near each other and transferring the heat that is lost during the firing of one kiln to the next one. Computer modeling enabled Staudhammer and Grigsby to design a furnace that uses 60% less gas.

Somerhalder emphasizes that "as in all environmental problems, there's usually a solution; it's just a very expensive solution." Because the *colonias* are not equipped with natural gas lines and the cost of LPG remains high, the conversion and increased-efficiency approaches to the problem have limited effectiveness. "It's a classic case of balancing the social and economic and environmental concerns," Somerhalder says. It would be easy, he says, to impose a strictly environmental solution from the top down by banning all dirty fuels, but the brickmakers of Mexico would probably be driven out of business altogether.

According to Michael Cormier of the Solar Energy Association, the pollution

